

Elko Nevada Area

Safety Alert

Subject: Heavy Fine Flashy Fuel Loadings (New Growth and Carryover)

Area of Concern: Firefighter Safety- Potential for Extreme Fire Behavior

Distribution: Elko Interagency Dispatch Center Zone of Influence

Discussion: The wet winter throughout the Great Basin has caused tremendous fine fuel growth in native, non-native and noxious weeds. Specifically, the non-native and noxious weed components, cheat grass (*Bromus tectorum*) and Red Brome (*Bromus rubens* L) have increased the amount of fine flashy fuels. In addition, statewide fine fuel carryover is estimated around 70% to 90% from the 2005 fire season adding to the continuity of the fuel bed.

Fuel loadings in fine fuels are heavy averaging 1500 to 2000 pounds dry weight. This has been reported in Idaho, Nevada, and Utah in the Canyon Lands and Great Basin ecosystems. Unusually heavy fuel loadings above 1000 pounds dry weight have also been reported in southern Nevada and southern Utah in the Mojave Desert ecosystem.

Fine fuels have been reported under stands of pinyon/juniper where it does not usually occur. Ignitions in these areas along with other ecological impacts from previous year's insect damaged and diseased vegetation along with the decreasing live fuel moisture values will be additive. Intensity and severity will increase and will significantly affect burning conditions.

Fire Behavior Concerns to Firefighters and the Public:

- Anticipate fire to creep under wetlines and retardant lines in areas where fine fuel matting is seen.
- Anticipate any ignition in flashy fine fuels to ignite easily and move rapidly. **You can't out run it!**
- Anticipate fire whirls because of a combination of fine flashy fuels, terrain, dry atmospheric conditions and strong surface instability.
- Anticipate large acres to be consumed in a short period of time. **In June, firefighters in the Elko area have reported extreme and advanced fire behavior typical of late August.**
- Fire behavior will burn the fine flashy fuels leaving some shrub components until the live fuel moisture values drop to about 115% to 120%. Watch out for re-burn situations! **Firefighters in the Elko area have reported intense fire behavior in the fine fuel component, while the shrub component is left intact, resulting in a "dirty" burn and perimeter. These perimeters can be deceptive!**
- Once the live fuel moisture values fall, flaming fronts will elongate and fires will burn with more intensity and fire behavior will become more extreme.
- Anticipate fires to exhibit extreme spread rates, elongated flaming fronts, and increasing fire brands; expect more long range spotting.
- Anticipate dependent and independent crown fires in the insect infested conifer stands.

Tactics

- Indirect tactics may have to be used earlier this year. **Firefighters in the Elko area report that direct attack is ineffective in most cases, and the use of heavy equipment and firing operations are effective to some degree.**
- Ensure firefighters have good anchor points - keeping one foot in the black. **"Anchor, Flank, and Pinch" should be in every firefighter's vocabulary!**
- Have adequate numbers of Field Observers and lookouts who understand the effects of weather changes, topography and can see the flaming front. **Establish trigger points and constantly re-evaluate tactics to ensure safe tactics are used.**